

Appl. No. 10/045,267
Amdt. Dated April 19, 2005
Reply to Office Action of February 23, 2005

APP 1291

Arguments/Remarks

Claims 1, 29, and 30 stand rejected for double patenting over claims of applicants' patent 6,795,709, claims 1, 2, 6, 7, 9, 10, 11, 13, 19, and 20 stand rejected as anticipated, 35 USC 102(e), by Inoue et al patent 6,520,153 (hereinafter Inoue), and claims 3-5, 8, 12, 14, 16-19, and 21-28 stand rejected, 35 USC 103(a), as unpatentable over Inoue and other cited art. In response thereto applicants are submitting a Terminal Disclaimer with reference to applicants' prior patent 6,795,709, are amending claims 1, 4, 17, 24, 27, 29, and 30, are canceling claims 5, 9-15, 18-23, and 28, and are submitting new claims 31-34.

Applicants respectfully submit that in rejecting applicants' prior claims on Inoue the Examiner has misread the Inoue disclosure. Inoue is concerned with whether an address assigned to a mobile computer which has moved from its home site can be reallocated in its home site. Inoue's teaching and disclosure are addressed to this problem and are based on what he identifies as finite and infinite leases. If the IP address given to a mobile computer in Inoue has a finite life time, then when that mobile computer moves, that address will not be assigned to a different mobile computer for a prescribed, i.e., finite, period of time, but will be reassigned after that finite period. The finite or prescribed period of time will depend on the number of mobile computers to be connected. This is discussed at column 9, lines 11-65 of Inoue; see also column 3, line 66 to column 4, line 17. However, if there are enough addresses available, the lease time for the mobile computer may be set at infinite, which means that it can be retained as the mobile computer moves to a visited site outside its home network; this is described at column 9, line 66 to column 10, line 11 with the various types of infinite leases being discussed at column 10, lines 12-33.

The provision of finite address leases as opposed to infinite address leases has no bearing or relationship to applicants' invention which is directed to the time sensitivity for assigning a IP address to a mobile terminal and distinguishes between time sensitive and time in-sensitive terminals. Inoue is assigning addresses for time periods, with the time period after the assignment being either prescribed, as a finite lease, or not, as an infinite lease. In other words, applicants and Inoue are looking at two different periods with respect to the assignment of IP addresses, with applicants being concerned with what happens before the IP address is assigned and Inoue being concerned with what happens after the IP address has been assigned.

Applicants also respectfully disagree with some of the statements made by the Examiner. For example the DHCPDISCOVER function does not "discover all the IP addresses available among all of the DHCP servers"; instead it is a broadcast message to find a server and does not discover or find the number of IP addresses at that server. Nor does Inoue, at column 2, lines 5-15 or column 6, lines 33-45, partition an IP address pool. These paragraphs discuss what the mobile computer does with its IP addresses, the home address and the care-of-address, and have nothing to do with a pool of addresses. Since Inoue actually has no relevance to applicants' invention, applicants also disagree with other of the Examiner's deductions from the Inoue disclosure.

Appl. No. 10/045,267
Amdt. Dated April 19, 2005
Reply to Office Action of February 23, 2005

APP 1291

In accordance with an aspect of applicants' present invention, not only is there a common IP address server, as in applicants' prior patent, but also there are a plurality of wireless IP address agents each having both a time-sensitive IP address pool and a classification process. In applicants' prior patent there are IP address pools associated with each base station in the network but all address requests are forwarded to the common IP address server which populates the local IP address pool in the wireless IP base stations. However, in accordance with an aspect of applicants' present invention, some decisions are made at the wireless IP address agents at the base stations so that a request for an IP address can be responded to without recourse to the common IP address server. This is related to applicants' designation of time sensitive as opposed to time in-sensitive terminals. Inoue has no teaching or suggestion of any disclosure related to this aspect of applicants' invention.

Claim 1 has been amended to recite applicants' invention more precisely and specifically to include in the method of that claim the steps of monitoring the IP types and frequency of address demands, with the wireless cell distinguishing between time sensitive and time in-sensitive demands, and the system IP address server updating the groups of address spaces based upon the number of time sensitive and time in-sensitive demands as distinguished by the wireless cell. None of this is to be found in or suggested by Inoue and the Inoue finite and infinite leases after assignment of IP addresses.

With respect to claims 3 and 4, rejected on Inoue in view of the Comer paper, applicants submit that the predictive analysis set forth for determining the total IP address pool for the wireless at the system IP address server is not disclosed by or suggested by Inoue at columns 14 and 15 identified by the Examiner. None of that discussion involves a total address pool nor partitioning the IP address pool into groups of address spaces and then updating the groups of address spaces based upon the number of time sensitive and time in-sensitive demands. Adding the moving weighted average from Comer to Inoue does not overcome the fundamental lack of relevance of the Inoue patent with respect to applicants' invention.

Inoue, at column 2, lines 6-25, discusses the mobile computer having a home address or a care-of-address. Applicants fail to see how this equates, as the Examiner has asserted with respect to claim 6, to Inoue disclosing that the mobile computer is one of a wireless handoff terminal, a resident terminal, and a wired terminal.

The Examiner had rejected dependent claim 8 on Inoue in view of Ford et al patent 6,101,499. Ford et al do discuss giving priority to an IP address server under certain conditions in a system which bears no resemblance to applicants' invention, and the addition of the Ford et al teaching to Inoue also does not overcome the deficiencies of Inoue, as discussed above. Similarly, with respect to claims 16, 17, and 24-27 the addition of the Jiang patent 6,857,018 with respect to guard bands to the Inoue disclosure does not overcome the deficiencies of the Inoue disclosure. Claims 17, 24, and 27 have, however, been amended to improve their form.

Claims 29 and 30 have been amended to correct some inaccuracies therein and to improve their form. In accordance with recitations in both of these claims the wireless IP

Appl. No. 10/045,267
Amdt. Dated April 19, 2005
Reply to Office Action of February 23, 2005

APP 1291

agent includes not only a time sensitive IP address pool but also a classification process which categorizes the wireless terminal requesting an IP address. Further, as recited in these claims, the wireless IP agent forwards IP address requests associated with time in-sensitive hosts to the common IP address server but forwards the requested address directly from its local time sensitive IP address pool without recourse to the common IP address server if the request is from a time sensitive host.

In rejecting claims 29 and 30 as anticipated by Inoue the Examiner has equated the Inoue finite and infinite leasing times with applicants' time sensitive and in-sensitive terminals. As discussed above, applicants submit that such is not the case. Inoue's teaching concerning whether an address assigned to a computer which has moved to a new site from its home site can be reallocated in its home site or not by setting lease times for IP addresses to finite or infinite does not equate to or suggest applicants' different treatment of requests from time sensitive and time in-sensitive hosts. Further, there is nothing in the Inoue Home Agent, depicted in Inoue Fig. 5, which provides for the forwarding of an IP address directly from a time sensitive IP address pool in a wireless IP agent to the host for time sensitive host requests and for forwarding the IP address request to the common IP address server for time in-sensitive host requests.

New claim 31 also clearly recites applicants' novel combination including the system IP address server including a plurality of address pools and the wireless IP agents including a local time sensitive IP address pool and a classification process which determines whether the request is from a time sensitive or in-sensitive host, the wireless IP agent directly forwarding an IP address to the host if time sensitive but forwarding the IP address request to the system IP address server if the requesting terminal is a time in-sensitive host.

New claim 32 recites applicants' method including the steps of the system IP address server allocating IP addresses to respective pools, the wireless IP agent receiving requests for an IP address and, if the request is time sensitive, directly providing an IP address from its local IP address pool, but if the request is time in-sensitive, forwarding the request to the system IP address server. New claims 33 and 34 are dependent claims further reciting how the wireless IP agent determines whether the request is time sensitive or time in-sensitive.

For the reasons set forth above applicants submit that claims 1-4, 6-8, 16, 17, 24-27, 29, and 30, as amended, and new claims 31-34 are clearly patentable. Accordingly, reconsideration and allowance of claims 1-4, 6-8, 16, 17, 14-27, 29, and 30, as amended, and favorable consideration and allowance of new claims 31 to 34 are therefore respectfully requested.

Appl. No. 10/045,267
Amdt. Dated April 19, 2005
Reply to Office Action of February 23, 2005

APP 1291

Applicants submit that this application is now in condition for allowance, and such action is also requested. However, if the Examiner deems it would in any way expedite the prosecution of this application, she is invited to telephone applicants' attorney at the number set forth below.

Respectfully submitted,

Prathima Agrawal et al

By: 

James W. Falk
Attorney for Applicants
Reg. No. 16,154
(732) 699-4465